Federal Funding Opportunity
National Institute of Standards and Technology
Fiscal Year (FY) 2008 Measurement, Science and Engineering Research Grants Programs

Overview Information

1. Federal Agency Name(s): Department of Commerce, National Institute of Standards and Technology (NIST)

2. Funding Opportunity Title: Measurement, Science and Engineering (MSE) Research Grants Programs for: (1) Electronics and Electrical Engineering Laboratory (EEEL); (2) the Manufacturing Engineering Laboratory (MEL); (3) the Chemical Science and Technology Laboratory (CSTL); (4) the Physics Laboratory; (5) the Materials Science and Engineering Laboratory (MSEL); (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Program; (8) the Information Technology Laboratory (ITL) Program; (9) the NIST Center for Neutron Research (NCNR); and (10) Center for Nanoscale Science and Technology (CNST.)

3. Announcement Type: Initial Announcement

4. Funding Opportunity Number: 2008-MSE-01

5. Catalog of Federal Domestic Assistance (CFDA) Number(s): 11.609

6. Dates: For CSTL: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the CSTL Grants Program in order to be processed under this solicitation.

For Building Research Grants and Cooperative Agreements Program: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Building Research Grants Program in order to be processed under this solicitation.

For Physics: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Physics Grants Program in order to be processed under this solicitation.

For CNST: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the CNST Grants Program in order to be processed under this solicitation.

For EEEL: All applications, paper and electronic, must be received no later than 5:00 p.m. Daylight Savings Time on June 15, 2008.

For ITL: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the ITL Grants Program in order to be processed under this solicitation.

For MEL: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the MEL Grants Program in order to be processed under this solicitation.

For MSEL: Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the MSEL Grants Program in order to be processed under this solicitation.

For NCNR: All applications, paper and electronic, must be received no later than 5:00 p.m. Daylight Savings Time on June 29, 2008.

For the Fire Research Program - Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Fire Research Grants Program in order to be processed under this solicitation.

Executive summary: The National Institute of Standards and Technology (NIST) announces that the following programs are soliciting applications for financial assistance for FY 2008: (1) the Electronics and Electrical Engineering Laboratory Grants Program; (2) the Manufacturing Engineering Laboratory Grants Program; (3) the Chemical Science and Technology Laboratory Grants Program; (4) the Physics Laboratory Grants Program; (5) the Materials Science and Engineering Laboratory Grants Program; (6) the Building Research Grants and Cooperative Agreements Program; (7) the Fire Research Grants Program; (8) the Information Technology Laboratory (ITL) Grants Program; (9) the NIST Center for Neutron Research (NCNR) Grants Program; and (10) the Center for Nanoscale Science and Technology (CNST) Grants Program.

Full Text of Announcement

a. Funding Opportunity Description:

Electronics and Electrical Engineering Laboratory (EEEL) Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: The *Electronics and Electrical Engineering Laboratory (EEEL) Grants Program* will provide grants and cooperative agreements for the development of fundamental electrical metrology and of metrology supporting industry and government agencies in the broad areas of semiconductors, electronic instrumentation, radio-frequency technology, optoelectronics, magnetics, superconductors, electronic commerce as applied to electronic products and devices, the transmission and distribution of electrical power, national electrical standards (fundamental, generally quantum-based physical standards), and law enforcement standards. Financial support may be provided to conferences, workshops, or other technical research meetings that are relevant to the mission of the Electronics and Electrical Engineering Laboratory Divisions and Offices.

All proposals submitted to the Electronics and Electrical Engineering Laboratory Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives. For additional details on EEEL research activities, please see the Electronics and Electrical Engineering Laboratory Web site at http://www.eeel.nist.gov .

Semiconductor Electronics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of silicon CMOS (complementary metal-oxide semiconductor) technology, MicroElectroMechanical Systems (MEMS), power electronics, nanoelectronics, nanobiotechnology, and electronic commerce. The contact person for this Division is Dr. David Seiler, and he may be reached at (301) 975–2054; david.seiler@nist.gov.

Office of Microelectronics Programs—The primary objective is to collaborate with or to conduct research consistent with NIST Laboratory programs in the areas of silicon CMOS (complementary metal-oxide semiconductor) and beyond-CMOS technologies aligned with semiconductor industry needs as expressed, for example, in the current International Technology Roadmap for Semiconductors (ITRS). The contact person for this Office is Dr. Stephen Knight and he may be reached at (301) 975–4400; stephen.knight@nist.gov.

Electromagnetics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of radio-frequency and microwave technology, electromagnetic fields, magnetics and superconductors (bulk). The contact person for this Division is Dr. Michael Kelley and he may be reached at (303) 497–4736; michael.kelley@nist.gov.

Quantum Electrical Metrology Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the areas of national electrical standards (fundamental, generally quantum-based physical standards), electronic instrumentation, and superconductors (cryoelectronics). The contact person for this Division Dr. David Wollman and he may be reached at (301) 975–2400; david.wollman@nist.gov..

Optoelectronics Division—The primary objective is to collaborate with or to conduct research consistent with EEEL Laboratory programs in the area of optoelectronics. The contact person for this Division is Dr. Kent Rochford and he may be reached at (303) 497–5285; kent.rochford@nist.gov.

Office of Law Enforcement Standards—The primary objective is to collaborate with or to conduct research consistent with OLES programs supporting law enforcement and (more broadly) first responder standards, including the areas of Weapons and Protective Systems; Detection, Inspection, and Enforcement Technologies; Chemical Systems and Materials; Forensic Sciences; Public Safety Communication Standards; and Critical Incident Technologies. The contact person for this Office is Dr. James Olthoff and he may be reached at (301) 975–2220; james.olthoff@nist.gov.

Manufacturing Engineering Laboratory (MEL) Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Manufacturing Engineering Laboratory (MEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Dimensional Metrology for Manufacturing, Mechanical Metrology for Manufacturing, Machine Tool and Machining Process Metrology, Intelligent Systems, and Information Systems Integration for Applications in Manufacturing.

All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Precision Engineering Division, 821--The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs in the areas of Engineering Metrology, Large-Scale Metrology, Nanometer-Scale Metrology including nano-manufacturing, and Surface Metrology. The contact person for this division is: Michael Postek, (301) 975-2299, michael.postek@nist.gov.

B. Manufacturing Metrology Division, 822--The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs and research in Mechanical Metrology (Mass, Force, Acoustics, and Vibration); Optics Metrology; Machine Tool and Machining Process Metrology; Smart Machining Systems; and Sensor Networking and Integration. The contact person for this division is: Kevin Jurrens, (301) 975-6600; kevin.jurrens@nist.gov.

C. Intelligent Systems Division, 823 – The primary objective is to collaborate with or conduct research consistent with NIST laboratory programs and research in Manufacturing Process and Equipment Interoperability, Industrial Control System Security, Intelligent Systems and Robotics, and Intelligent Control of Mobility Systems. The contact person for this division is: Albert Wavering, (301) 975-3418; albert.wavering@nist.gov.

D. Manufacturing Systems Integration Division, 826--The primary objective is to pursue semantics- and ontology-based systems integration technology and standards through collaboration with NIST laboratory programs in Manufacturing Interoperability, covering enterprise integration, e-commerce, supply chain integration, product and process engineering, manufacturing simulation and visualization; Homeland Defense and Emergency Response, specifically simulation integration;. The contact person for this division is: Steven R. Ray, (301) 975-3508; steven.ray@nist.gov.

Chemical Science and Technology Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Chemical Science and Technology Laboratory (CSTL) Grants Program* will provide grants and cooperative agreements consistent with the CSTL mission in the following fields of measurement science research, focused on reference methods, reference materials and reference data: Biochemical Science Process Measurements, Surface and Microanalysis Science, Physical and Chemical Properties, and Analytical Chemistry.

CSTL is the United States' reference laboratory for chemical measurements, entrusted with developing, maintaining, advancing, and enabling the chemical measurement system for the nation. Today, CSTL has the most comprehensive array of chemical, physical, and engineering measurement capabilities of any group working in chemical science and technology. Our broad customer base includes established industrial sectors and emerging industries, government agencies, standards and trade organizations, and the academic and scientific communities. CSTL is recognized as the world's leading chemical metrology laboratory, and our technical excellence, broad range of capabilities, and flexibility have served us well towards responding to the changing needs of the nation.

The Programs are structured to support CSTL's three objectives:

- Provide the national traceability and international comparability structure for measurements in chemistry, chemical engineering, and biochemical sciences.

• Assure that U.S. industry has access to accurate and reliable data and predictive models to determine the chemical and physical properties of materials and processes;
• Anticipate and address next-generation measurement needs of the Nation.

The appropriate Division Chief for each field of research described in this section may be contacted for clarification of the program objectives. Additional information about the Divisions and CSTL Programs may be obtained at the following Web site: http://www.cstl.nist.gov/.

CSTL conducts its research and is organized along disciplinary lines:

Biochemical Science Division: DNA chemistry, sequencing; Protein structure, properties, and modeling; Biomaterials; Biocatalysis and bioprocessing measurements. The contact person for this division is: Dr. Laurie Locascio may be reached at (301) 975-2129.

Process Measurements Division: Research, calibration services and provision of primary standards for temperature, pressure, vacuum, humidity, fluid flow, air speed, liquid density and volume, and gaseous leak-rate measurements; Sensor research. The contact person for this division is: Dr. James R. Whetstone, and he may be reached at (301) 975-2600.

Surface and Microanalysis Science Division: Nanoscale chemical characterization; Particle characterization and standards; Electronic and advanced materials characterization; Surface and interface chemistry; Advanced isotope metrology. The contact person for this division is: Dr. Greg Gillen (act.), and he may be reached at (301) 975-3914.

Physical and Chemical Properties Division: Basic reference data; Data for process and product design; Properties of energy-related fluids; Fundamental studies of fluids; Cryogenic technologies; Computational chemistry. The contact person for this division is: Dr. Daniel Friend, and he may be reached at (303) 497- 5424.

Analytical Chemistry Division: Chemical measurements research and services in: Analytical sensing technologies; Classical analytical methods; Gas metrology; Laboratory automation technology; Nuclear analytical methods; Organic analytical methods; and Spectrochemical measurement methods. The contact person for this division is: Dr. Stephen Wise, and he may be reached at (301) 975-3108.

Physics Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Physics Laboratory (PL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Electron and Optical Physics, Atomic Physics, Optical Technology, Ionizing Radiation, Time and Frequency, and Quantum Physics.

All proposals submitted to the Physics Laboratory Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Physics Laboratory Office, 840 – Support may be provided to conferences, workshops, or other technical research meetings that are relevant to the mission of the Physics Laboratory. Support is generally provided in increments of $5,000 per award.

B. Electron and Optical Physics Division, 841--The primary objective is to collaborate or conduct research consistent with the division activities in far ultraviolet radiometric metrology, the characterization of EUV optical devices used in semiconductor lithography and remote sensing applications, and Bose-Einstein condensation and quantum information. The contact person for this division is Dr. Charles W. Clark and he may be reached at (301) 975-3709.

C. Atomic Physics Division, 842--The primary objective is to collaborate or conduct research consistent with division programs aimed at determining basic atomic properties and developing new metrology techniques in atomic spectroscopy, make precision measurements related to atomic spectroscopy, support research efforts in fundamental quantum processes including nanophotonics and cold atom physics including Bose-Einstein condensation and Fermi degenerate gases, and conduct research in the areas of quantum information science, laser cooling and trapping, and quantum metrology. The contact person for this division is Dr. Carl J. Williams and he may be reached at (301) 975-3200.

D. Optical Technology Division, 844--The primary objective is to develop, improve, and maintain national standards for radiation thermometry, spectroradiometry, photometry, and spectrophotometry and to conduct basic theoretical and experimental research on the photophysical and photochemical properties of materials and biomolecular systems, on

radiometric and spectroscopic techniques and instrumentation, and on the application of optical technologies. The contact person for this division is Dr. Gerald T. Fraser and he may be reached at (301) 975-2316.

E. Ionizing Radiation Division, 846--The primary objective is to provide primary standards, measurement methods, and technology to collaborate or conduct research consistent with the Division's work in meeting national needs in radiation interactions and dosimetry, neutron interactions and dosimetry, and radioactivity, including both theoretical/experimental and applied research programs in support of industry, health Care, and homeland security. The contact person for this division is Dr. Lisa R. Karam and she may be reached at (301) 975-5561.

F. Time and Frequency Division, 847--The primary objective is to collaborate or conduct research consistent with the divisions basic and applied research programs in the areas of time and frequency standards, phase noise measurements, network synchronization, ion storage, quantum information, atomic standards and optical frequency measurements in support of future standards, chip-scale atomic clocks and related devices, time and frequency dissemination services, support of time and frequency applications such as navigational systems and telecommunications, and measurement methods. The contact person for this division is Dr. Thomas R. O'Brian and he may be reached at (303) 497-4570.

Materials Science and Engineering Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Materials Science and Engineering Laboratory (MSEL) Grants Program* will provide grants and cooperative agreements in the following fields of research: Ceramics; Metallurgy; Polymers; and Materials Reliability.

All proposals submitted to the MSEL Grants Program must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Laboratory Office, 850--The primary objective is to collaborate with or conduct research consistent with the Materials Science and Engineering Laboratory activities of importance to materials science generally, including portions of Federal research and development programs performed in concert with other Federal agencies; and theoretical and computational materials science. Support may also be provided to conferences, workshops, or other technical research meetings that are relevant to the mission of the Materials Science and Engineering Laboratory. Support is generally provided in increments of $2,000 to 5,000 per award.

B. Ceramics Division, 852--The primary objective is to collaborate with or conduct research consistent with the division projects in nanomechanical properties, functional properties, structure determination methods, and synchrotron methods through the development of measurement instrumentation, methods, standards, and comprehensive databases. The contact person for this division is: Dr. Douglas Smith and he may be reached at (301) 975-5768 or by e-mail at douglas.smith@nist.gov.

C. Materials Reliability Division, 853--The primary objective is to collaborate with or conduct research consistent with the division activities in the metrology of microelectronic and optoelectronic structures, thin films and nanostructures, and biomaterials. The contact person for this division is: Dr. Thomas Siewert and he may be reached at (303) 497-3523 or by e-mail at siewert@boulder.nist.gov.

D. Polymers Division, 854--The primary objective is to collaborate with or conduct research consistent with the division programs in electronics materials, biomaterials, combinatorial methods, nano-structured materials and processing characterization through participation in research on metrology, synthesis, processing and characterization of structure, mechanical, thermal and electrical properties. The contact person for this division is: Dr. Kalman Migler and he may be reached at (301) 975-4876 or by e-mail at kalman.migler@nist.gov.

E. Metallurgy Division, 855--The primary objective is to collaborate with or conduct research consistent with division programs in magnetic materials, computational materials science, mechanics of materials, nanostructured materials and processing, and electronic materials. The contact person for this division is: Dr. Daniel Josell and he may be reached at (301) 975-5788 or by e-mail at daniel.josell@nist.gov.

Building Research Grants and Cooperative Agreements Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Building Research Grants and Cooperative Agreements Program* will provide grants and cooperative agreements in the following fields of research: Structures, Construction Metrology and Automation, Inorganic Materials, Polymeric Materials, HVAC & R Equipment Performance, Mechanical Systems and Controls, Heat Transfer and Alternative Energy Systems, Computer Integrated Building Processes, and Indoor Air Quality and Ventilation.

The Building Research Grants and Cooperative Agreements Program supports the formal mission of the Building and Fire

Research Laboratory, which is to meet the measurement and standards needs of the Building and Fire communities. All proposals submitted must be in accordance with the program objectives listed below. The appropriate Program Manager for each field of research may be contacted for clarification of the program objectives.

A. Materials and Construction Research Division, 861--The primary objective is to collaborate with or conduct research consistent with the laboratory programs in the areas of Structures, Construction Metrology and Automation, Inorganic Materials, and Polymeric Materials (including safety, security, and sustainability of building and physical infrastructure, service-life performance of building materials, and construction cycle time reductions). The contact person for this division is: Dr. Jonathan Martin at 301-975-6717

B. Building Environment Division, 863--The primary objective is to collaborate with or conduct research consistent with the laboratory programs in areas related to the dissemination of Critical Building Information to First Responders, security issues related to ASHRAE's BACnet protocol, secure and reliable BACnet/electric utility communications, biometric applications in building automation systems, information representation and exchange and access methods for building commissioning and operations, life-cycle information management in buildings, computer integrated building processes and services, and indoor air quality modeling and simulation. The contact person for this division is: Dr. A. Hunter Fanney, and he may be reached at (301) 975-5864. For details on these various activities, please see the Building and Fire Research Laboratory Web site at http://www.bfrl.nist.gov. Note that documents describing the current programs for the two technical divisions are available through the homepage.

Fire Research Grants Program

Authority: 15 U.S.C. § 278f

Program Description: *The Fire Research Grants Program* will provide funding for innovative ideas in the fire research area generated by the proposal writer, who chooses the topic and approach.

The program description and objectives for the Fire Research Grants Program are as follows:

A. Analysis and Prediction Group: The objectives are to develop understanding and predictive methods for dynamic fire phenomena to advance fire science and engineering practice and to perform research into the heat and mass transfer processes occurring in fires in order to improve predictions of (1) the growth, spread, and suppression of fires; (2) the reaction of structures to fires; and (3) emissions transport from fires of all scales. Experiments and metrology are developed and used to support and verify advanced computer simulations of fire phenomena, fire hazards, fire protection, and fire fighting. Proposals are particularly solicited for developing tools (measurement and predictive) to assist communities in their fire risk assessment and choice of economically balanced mitigation strategies for limiting the ignition of residences and improving firefighter and community safety. The contact person for this group is: Dr. Anthony Hamins, and he may be reached at (301) 975-6598.

B. Fire Metrology Group: The objective is to apply measurement science in the development and quantification of experimental methods and to apply these measurement methods, supplemented by theoretical analyses, to understanding fire phenomena, and the reaction of materials and structures to fire. Current areas of emphasis are understanding the effects of soot volume fraction, temperature, and soot optical properties on the radiant flux in a fire environment, developing a quality facility for heat release rate measurements, instituting large field optical diagnostics for the characterization of fire induced flows, measuring deformation and stress of structural members in a fire, measuring deformation and stress of structural members in a fire, and fire safety in the hydrogen economy focusing on hydrogen dispersion, ignitability, and flammability from leaks, hydrogen detection, and hydrogen fire mitigation strategies. The contact person for this group is: Dr. Jiann Yang, and he may be reached at (301) 975-6662.

C. Fire Fighting Technology Group: The objectives are to conduct research that enables advances in fire fighter safety, fire ground operations, and effectiveness of the fire service; that develop and apply measurements, modeling, and technology, and improve the understanding of the behavior, prevention and control of fires to enhance fire fighting operations and equipment, fire suppression, fire investigations, and disaster response; and that provide input, including experimental data, fire modeling and test protocols, to advance the effectiveness of fire safety standards and codes. The contact person for this group is Mr. Nelson Bryner, and he may be reached at (301) 975-6868.

D. Materials and Products Group: The objective is to perform research enabling the confident development by industry of new, less-flammable materials and products. This capability is based on understanding fundamentally the mechanisms that control the ignition, flame spread and burning rate of materials, as well as the chemical and physical characteristics that affect these aspects of flammability. A primary focus is on the study of nano-particle based flame retardant additives and polymer nanocomposites. This includes (1) developing methods of measuring the response of a nano-material to fire conditions that enable assured prediction of the full-scale performance of the final product; (2) developing computational molecular dynamics and other mechanistic approaches to understand nano-particle flame retardant mechanisms and the effects of polymer chemical structure on flammability; (3) characterizing the burning rates of charring and non-charring polymers and composites; and (4) delineating and modeling the enthalpy, mass transfer and melt-dripping mechanisms of

materials during combustion. A fifth area of interest is fundamental materials studies to advance the development of inorganic and organic structural fire protective coatings and materials. Prediction and measurement of thermal/mechanical properties, durability, adhesion, and cohesion under fire conditions and long-time environmental exposure are of interest. The contact person for this group is Dr. Jeffrey Gilman, and he can be reached at (301) 975-6573.

E. Integrated Performance Assessment Group: The objectives are to create and disseminate enhanced data, develop fundamental understanding of fire and emergency phenomena, and support computer modeling and prediction of (1) fire detection and building fire systems; (2) human behavior and egress during building (fire) emergencies; (3) toxicity of combustion products; (4) fire hazard and risk assessment; (5) decision analysis; (6) fire fighting operations and training; and (7) fire investigation. Modeling and enhanced data are used to conduct performance evaluation and design of fire protection systems in buildings and to quantify and reduce uncertainty in model predictions. Enhanced data is disseminated through development of multi-medial web-enabled databases. The content and process associated with the building and fire codes and standards system is another current area of focus.What is desired is a theoretical basis for an examination of the entire subject of quality control of buildings over their entire life cycles, as a framework for analysis of the opportunities for the use of advances in technology to improve the reliability and cost-effectiveness of building quality control measures. In particular, NIST is interested in funding academic research in one or more of the following areas: (1) Development of a theoretical framework for building life cycle quality assurance and an analysis of the relative effectiveness of our building and fire codes system; (2)establishment of a theoretical basis for development of alternative strategies for building life cycle quality assurance, including public health and safety regulation of buildings; and (3) an analysis of the potential impacts of application of advances of measurement, information, computing and building technologies to building life cycle quality and safety assurance. The contact person for this group is: Mr. Thomas Cleary, and he can be reached at (301) 975-6858.

Information Technology Laboratory Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Information Technology Laboratory Grants Program* will provide grants and cooperative agreements in the broad areas of mathematical and computational sciences, advanced network technologies, information access, and software testing. Specific objectives of interest in these areas of research include: quantum information theory, computational materials science, network science, mathematical foundations of measurement science for information systems, mathematical knowledge management, visual data analysis, verification and validation of computer models, computational biology, semantic data integration, software testing, human-robot interaction, human factors/security/core requirements/testing of voting systems, information visualization, systems biology, grid computing, service oriented architecture and complex systems, security for the IPv6 transition from and coexistence with IPv4, and device mobility among heterogeneous networks. For details on these various activities, please see the Information Technology Laboratory web site at http://www.itl.nist.gov.

Additionally, the ITL Grant Program will provide grants and cooperative agreements in support of conferences, workshops, and other technical research groups that focus on trends and future focus areas of information technology.

Contact the *Information Technology Laboratory Grant Program Manager:* Kamie Roberts, (301) 975-2901, kroberts@nist.gov for clarification of the program objectives.

NIST Center for Neutron Research Grants Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The NIST Center for Neutron Research (NCNR) Grants Program* will provide grants and cooperative agreements for research involving neutron scattering, for the development of innovative technologies that advance the state-of-the-art in neutron research, and for the support of conferences and/or workshops that advance these objectives. .

All proposals submitted to the NCNR Grants Program must be in accordance with the program objectives. These are to create novel approaches to advance high resolution cold and thermal neutron scattering research; to develop new applications of neutron scattering to physics, chemistry, and macromolecular and materials research; and to support the development of innovative technologies relevant to neutron research, including, for example, high resolution two-dimensional neutron detectors, neutron monochromators, and neutron focusing and polarizing devices. Awards to universities to help to promote research by university students at the NIST/NSF Center for High Resolution Scattering are also funded under this program. Dr. Dan Neumann should be contacted for any inquiries about the objectives for this NCNR program. He can be reached at (301) 975-5252 or by e-mail at dan.neumann@nist.gov.

Center for Nanoscale Science and Technology Grants and Cooperative Agreements Program

Authority: 15 U.S.C. § 272(b) and (c)

Program Description: *The Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program* will offer financial assistance in the field of nanotechnology specifically aimed at developing essential measurement methods, instrumentation, and standards to support nanotechnology development, from discovery to production, conducting collaborative research with NIST scientists including research at the CNST Nanofab, a national facility for nanofabrication and measurement, and assisting visiting researchers at the CNST.

The primary program objectives of the financial assistance program in CNST are to develop new measurement methods, instrumentation and standards for nanotechnology and explore new areas of nanoscale science and technology in a variety of areas including nanofabrication, nanomagnetics, theory and modeling, post complementary metal oxide semiconductor electronics, nano electro mechanical systems, nanomotion and nanomanipulation, merging length scales, 2-D and 3-D structural and chemical imaging, electrical and magnetic dynamical response of nanostructures, electrical characterization of nanostructures, nanoscale properties of soft matter; to assist and train CNST collaborators and nanofabrication facility users in their research; and to conduct other outreach and educational activities that advance the development of nanotechnology by U.S. university and industrial scientists. This will entail collaborative research among the selected financial assistance recipients and CNST.

b. Award Information:

The funding instruments used in these programs will be grants and cooperative agreements, as appropriate. Where cooperative agreements are used, the nature of NIST's "substantial involvement" will generally be collaboration with the recipient by working jointly with a recipient scientist in carrying out the scope of work, or specifying direction or redirection of the scope of work due to inter-relationships with other projects requiring such cooperation.

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Electronics and Electrical Engineering Laboratory Grants Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves.)

In fiscal year 2007, the *EEEL Grants Program* made 10 new awards, totaling $636,245. The amount available each year fluctuates considerably based on programmatic needs and funding availability. Individual awards are expected to range between $5,000 and $150,000.

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MEL program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2007, the *MEL Grants Program* funded 8 new awards, totaling $729,775.49. In fiscal year 2008 the *MEL Grants Program* anticipates funding of approximately $500,000. Individual awards are expected to range from approximately $25,000 to $250,000.

Chemical Science and Technology Laboratory Grant Program

For the *Chemical Science and Technology Laboratory Grant Program*, proposals will be considered for research projects

from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the Chemical Science and Technology Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e. the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

No funds have been set aside specifically for the *CSTL Grants Program*. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by individual divisions within the laboratory. Where funds are identified as available for grants, those funds will be awarded to highly ranked proposals as determined by the process described in this notice.

In fiscal year 2007, the *CSTL Grants Program* funded 4 new awards, totaling $341,195.00. In fiscal year 2008, the *CSTL Grants Program* anticipates funding of approximately $1,000,000. Individual awards are expected to range from approximately $5,000 to $100,000.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year project is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the Physics Laboratory program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2007, the PL Grants Program funded 13 new awards, totaling $1,718,401.00. In fiscal year 2008, the PL Grants Program anticipates funding of approximately $2,000,000, including new awards and continuing projects. Funding availability will be apportioned by quarter. Individual awards are expected to range from approximately $5,000 to $500,000 per year.

Materials Science and Engineering Laboratory Grants Program

For the *MSEL Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the MSEL program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2007, the *MSEL Grants Program* funded 19 new awards, totaling $1,484,478.66. In fiscal year 2008, the *MSEL Grants Program* anticipates funding of approximately $3,300,000, including new awards and continuing projects. Most grants and cooperative agreements are expected to be in the $2,000 to $500,000 per year range.

Building Research Grants and Cooperative Agreements Program

For the *Building Research Grants and Cooperative Agreements Program*, proposals will be considered for research projects from one to three years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Building Research Grants and Cooperative Agreements Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into

annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2007, the *Building Research Grants and Cooperative Agreements Program* funded 7 new awards, totaling $378,908.00. No funds have been set aside specifically for the Building Research Grants and Cooperative Agreements Program. The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. Individual awards are expected to range between $5,000 and $150,000.

Fire Research Grants Program

For the *Fire Research Grants Program,* proposals will be considered for research projects from one to three years. When a proposal for a multi-year project is approved, funding will normally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional future funding in connection with that award. Funding for each subsequent year of a multi-year proposal will be contingent on satisfactory progress, continuing relevance to the mission of the NIST Fire Research Program, and the availability of funds.

For the *Fire Research Grants Program,* the annual budget is approximately $1.0 to $1.5 million. Because of commitments for the support of multi-year projects and because proposals may have been deferred from the previous year's competition, only a portion of the budget is available to fund applications received in response to this notice. Most grants and cooperative agreements are in the $25,000 to $125,000 per year range, with a maximum requested duration of three years. In fiscal year 2007, the *Fire Research Grants Program* funded 13 new awards, totaling $1,028,069.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory Grants Program*, proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Information Technology Laboratory Grants Program*, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if prospective funding is not made available to the applicant, (i.e., the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves).

In fiscal year 2007, the *Information Technology Laboratory* funded 7 new awards, totaling $169,071.00. No funds have been set aside specifically for the *Information Technology Laboratory Grants Program.* The availability of funds depends upon actual authorization of funds and other costs expected to be incurred by the individual divisions. The amount available each year fluctuates considerably based on programmatic needs. Individual awards are expected to range between $10,000 and $150,000.

NIST Center for Neutron Research (NCNR) Grants Program

The *NCNR Grants Program* will consider proposals lasting from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the NCNR program, and the availability of funds. The multi-year awards must have scopes of work that can be easily separated into annual increments of meaningful work that represent solid accomplishments if subsequent funding is not made available to the applicant, i.e. the scopes of work for each funding period must produce identifiable and meaningful results in and of themselves. In fiscal year 2007, NCNR made three awards totaling $176,645. Most grants and cooperative agreements are expected to be in the $25,000 to $100,000 per year range.

Center for Nanoscale and Science and Technology

For the *Center for Nanoscale and Science and Technology,* proposals will be considered for research projects from one to five years. When a proposal for a multi-year award is approved, funding will generally be provided for only the first year of the program. If an application is selected for funding, NIST has no obligation to provide any additional funding in connection with that award. Continuation of an award to increase funding or extend the period of performance is at the total

discretion of NIST. Funding for each subsequent year of a multi-year proposal will be contingent upon satisfactory progress, continued relevance to the mission of the *Center for Nanoscale Science and Technology Grants and Cooperative Agreements Program*, and the availability of funds..

In fiscal year 2007, the *CNST Grants and Cooperative Agreements Program* made one award in the amount of $47,000. In fiscal year 2008, the CNST Grants and Cooperative Agreements Program anticipates funding of approximately $1,500,000, including new awards and continuing projects. Individual awards are expected to range from approximately $40,000 to $150,000 per year.

c. Eligibility Information

All programs listed in this funding opportunity notice are open to institutions of higher education; hospitals; non-profit organizations; commercial organizations; state, local, and Indian tribal governments; foreign governments; organizations under the jurisdiction of foreign governments; and international organizations.

Cost Sharing or Matching: There is no cost sharing or matching requirements for the programs listed in this funding opportunity notice.

d. Application and Submission Information

Address to Request Application Package: Complete application packages may be obtained by contacting the below named offices and personnel.

Electronics and Electrical Engineering Laboratory Grants Program

Paper applications must be submitted to: Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100.

Manufacturing Engineering Laboratory Grants Program

Paper applications must be submitted to: Ms. Alana Glover, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Building 220, Room B322, Gaithersburg, Maryland 20899-8200.

Chemical Science and Technology Laboratory Grants Program

Paper applications must be submitted to: Ms. Donna Kimball, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300.

Physics Laboratory Grants Program

Paper applications must be submitted to: Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400.

Materials Science and Engineering Laboratory

Paper applications must be submitted to: Ms. Nancy Selepak, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500.

Building Research Grants and Cooperative Agreements Program

Paper applications must be submitted to: Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602.

Fire Research Grants Program

Paper applications must be submitted to: Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland 20899-8660.

Information Technology Laboratory Grants Program

Paper applications must be submitted to: Kamie Roberts, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, Maryland 20899-8900.

NIST Center for Neutron Research (NCNR)

Paper applications must be submitted to: Mr. Michael Moore, NIST Center for Neutron Research, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8562, Gaithersburg, Maryland 20899-8562.

Center for Nanoscale and Science and Technology

Paper applications must be submitted to: Donna Lauren, Center for Nanoscale Science and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6200, Gaithersburg, Maryland 20899-6200.

The following **applies to ALL programs** listed in this funding opportunity notice:

For electronic submission - Applicants should follow the Application Instructions provided at Grants.gov when submitting a response to this funding opportunity. Applicants are encouraged to start early and not wait to the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov.

2. Content and Form of Application Submission:

The following **applies to ALL programs** listed in this funding opportunity notice:

Complete applications/proposals must include the following forms and documents:

- SF-424, Application for Federal Assistance
- SF-424A, Budget Information Non-Constructions
- SF-424B, Assurances Non-Construction
- CD-511, Certification Regarding Lobbying

- SF-LLL, Disclosure of Lobbying Activities (IF APPLICABLE)
- Technical Proposal responsive to program description(s)
- Budget Narrative

Proposals that are submitted without a Technical Proposal and/or a Budget Narrative will be rejected. There is no set format for the Technical Proposal and the Budget Narrative, other than that they are word-processed documents written by the applicant. The Technical Proposal should describe in depth the scope of the proposal, its goals, the methods and equipment to be used, its schedule, the personnel working on the project and their qualifications, and the institutional capabilities of the applicant. The Budget Narrative should detail the funds requested, their purposes, and the timetable for using the funds. Applicant is responsible for ensuring that the application, whether submitted via Grants.gov or otherwise, is complete and that it conforms to the requirements of this notice.

IN AN EFFORT TO ROUTE THE APPLICATION TO THE APPROPRIATE PROGRAM OFFICIALS, APPLICANTS SHOULD INCLUDE ON THE COVER PAGE OF THE TECHNICAL PROPOSAL THE NAME OF THE GRANT AND/OR COOPERATIVE AGREEMENT PROGRAM AGAINST WHICH THEY ARE APPLYING. THE CHOICES ARE:

(1) Electronics and Electrical Engineering Laboratory (EEEL);
(2) Manufacturing Engineering Laboratory (MEL);
(3) Chemical Science and Technology Laboratory (CSTL);
(4) Physics Laboratory;
(5) Materials Science and Engineering Laboratory (MSEL);
(6) Building Research Program;
(7) Fire Research Program;
(8) Information Technology Laboratory Program (ITL); and
(9) NIST Center for Neutron Research (NCNR).
(10) Center for Nanoscale Science and Technology (CNST)

3. Submission Dates and Times:

CSTL Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the CSTL Grants Program in order to be processed under this solicitation.

Building Research Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Building Research Grants Program in order to be processed under this solicitation.

Physics Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Physics Grants Program in order to be processed under this solicitation.

MEL Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the MEL Grants Program in order to be processed under this solicitation.

MSEL Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the MSEL Grants Program in order to be processed under this solicitation.

EEEL Grants and Cooperative Agreements Programs

All applications, paper and electronic, must be received no later than 5:00 p.m. Eastern Daylight Time on June 15, 2008.

ITL Grants and Cooperative Agreements Programs

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the ITL Grants Program in order to be processed under this solicitation.

Fire Research Grants Program

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY 2009 solicitation for the Fire Research Grants Program in order to be processed under this solicitation.

NIST Center for Neutron Research Grants Program

All applications, paper and electronic, must be received no later than 5:00 p.m. Daylight Savings Time on June 29, 2008.

Center for Nanoscale and Science and Technology

Applications will be considered on a continuing basis. Applications received after June 1, 2008 may be processed and considered for funding under this solicitation in the current fiscal year or in the next fiscal year, subject to the availability of funds. Applications, paper and electronic, must be received prior to the publication date in the Federal Register of the FY

2009 solicitation for the CNST Grants Program in order to be processed under this solicitation.

4. Intergovernmental Review: Executive Order 12372: Applications under this program are not subject to Executive Order 12372, ``Intergovernmental Review of Federal Programs."

5. Funding Restrictions: Not applicable.

6. Other Submission Requirements: None

e. Application Review Information

1. Criteria:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, the evaluation criteria and weights to be used by the technical reviewers in evaluating the proposals are as follows:

Proposal addresses specific program objectives as described in this notice (25%);
Proposal provides evidence of applicant's expertise in relevant technical area (20%);
Proposal offers innovative approach (20%);
Proposal provides realistic schedule with defined milestones (20%);
Proposal provides adequate rationale for budget (15%).

Manufacturing Engineering Laboratory Grants Program

For the *MEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of manufacturing engineering and metrology research. Proposals must be relevant to current MEL research and have a relation to the objectives of ongoing MEL programs and activities.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of measurement science, especially as it pertains to reference methods, reference materials and reference data in Chemical Science and Technology.

Each of these factors will be given equal weight in the evaluation process.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues that are relevant to Physics Laboratory programs.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of physics.

Each of these factors will be given equal weight in the evaluation process.

Materials Science Engineering Laboratory Grants Program

For the *MSEL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.
3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of materials science and engineering. Proposals must be relevant to current MSEL research and have a relation to the objectives of ongoing MSEL programs and activities.

Each of these factors will be given equal weight in the evaluation process.

Building Research Grants and Cooperative Agreement Program

The Divisions of the Building and Fire Research Laboratory will score proposals based on the following criteria and weights:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal and the fit to NIST's in-house building research programs. (0 – 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to NIST's in-house programs and the building industry. (0 – 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 – 20 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 – 20 points).

Fire Research Grants Program

For the *Fire Research Grants Program*, the technical evaluation criteria are as follows:

1. Technical quality of the research. Reviewers will assess the rationality, innovation and imagination of the proposal. (0 - 35 points);

2. Potential impact of the results. Reviewers will assess the potential impact and the technical application of the results to the fire safety community. (0 - 25 points);

3. Staff and institution capability to do the work. Reviewers will evaluate the quality of the facilities and experience of the staff to assess the likelihood of achieving the objective of the proposal. (0 - 20 points);

4. Match of budget to proposed work. Reviewers will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 - 20 points).

Information Technology Laboratory Grants Program

For the *ITL Grants Program*, the evaluation criteria the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.

2. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of information technology research.

3. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project.

4. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.

Each of these factors will be given equal weight in the evaluation process.

NIST Center for Neutron Research Grants Program

The *NCNR Grants Program* evaluation criteria that the technical reviewers will use in evaluating the proposals are as follows:

1. Rationality. Reviewers will assess the innovation, rationality, and coherence of the applicant's approach and the extent to which the proposal effectively addresses important scientific and technical issues using neutron methods and/or the development of innovative devices for neutron research. (0 to 35 points)

2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in the project. (0 to 20 points)

3. Resources. Reviewers will consider the extent to which the proposer has access to the necessary resources, facilities, and overall support to accomplish project objectives, and will assess the budget against the proposed work to ascertain the reasonableness of the request. (0 to 20 points)

4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to neutron research. (0 to 25 points)

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

For the *Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program*, the technical reviewers will use the following evaluation criteria in evaluating the proposals:

1. Rationality. Reviewers will consider the coherence of the applicant's approach and the extent to which the proposal effectively addresses scientific and technical issues.
2. Qualifications of Technical Personnel. Reviewers will consider the professional accomplishments, skills, and training of the proposed personnel to perform the work in this project.
3. Resources Availability. Reviewers will consider the extent to which the proposer has access to the necessary facilities and overall support to accomplish project objectives.
4. Technical Merit of Contribution. Reviewers will consider the potential technical effectiveness of the proposal and the value it would contribute to the field of physics.

Each of these factors will be given equal weight in the evaluation process.

2. Review and Selection Process:

Electronics and Electrical Engineering Laboratory Grants Program

For the *Electronics and Electrical Engineering Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the EEEL Grants Coordinator, or the Deputy Director of EEEL, will determine the compatibility of the applicant's proposal with EEEL Program Areas and the relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. If it is determined that all funds available for the *EEEL Grants Program* for the given fiscal year have been exhausted, the proposal will not be reviewed for technical merit. Proposers may contact EEEL at 301-975-2220 to find out if funds have been exhausted for the fiscal year. EEEL will also post a notice on its web site, http://www.eeel.nist.gov/eeel_grants/ , when funds are exhausted for the fiscal year. EEEL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, proposals will be distributed for technical review by the EEEL Grants Coordinator, or other technical professionals familiar with the programs of the Electronics and Electrical Engineering Laboratory, to the appropriate Division or Office based on technical area. At least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Reviews will be conducted on a monthly basis, and all proposals received on or before the 15th day of the month will be ranked based on the reviewers' scores.

Third, the Division Chief or Office Director will make application selections. In making application selections, the Division Chief or Office Director will take into consideration the results of the reviewers' evaluations, the availability of funding, and relevance to the objectives of the *Electronics and Electrical Engineering Laboratory Grants Program*, as described in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Manufacturing Engineering Laboratory Grants Program

For the MEL Grants Program responsive proposals will be assigned, as received on a rolling basis, to the most appropriate area for review. Proposals will be reviewed in a three-step process. First, the MEL Deputy Director or the appropriate MEL Division Chief will determine the applicability of the proposal with regard to MEL programs and the relevance of the proposal's objectives to current MEL research. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. Second, the appropriate MEL Division Chief or MEL Program Manager will determine the possibility for funding availability within the MEL technical program area most relevant to the objectives of the proposal. If it is determined that sufficient funding is not available to consider grants proposals in the technical area of the proposal, the proposal will not be reviewed for technical merit. Third, if the proposal passes the first two steps, at least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposal with each other, but scores will be determined on an individual

basis, not as a consensus.

The MEL Director or appropriate MEL Division Chief will make application selections from the grants proposals submitted. In making the application selections, the Laboratory Director or Division Chief will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *MEL Grants Program.* These objectives are described above in the Program Description section.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Chemical Science and Technology Laboratory Grants Program

For the *Chemical Science and Technology Laboratory Grants Program*, proposals will be reviewed in a three-step process. First, the CSTL Grants Coordinator, the Deputy Director of CSTL or the corresponding Division Chief, will determine the compatibility of the applicant's proposal with CSTL Program Areas and the relevance to the objectives of the *Chemical Science and Technology Laboratory Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area addressed by the proposal will conduct a technical review based on the evaluation criteria. Reviews will be conducted on a quarterly basis, subject to the availability of funds, and all responsive, complete proposals received and reviewed since the last quarter will be ranked based on the reviewers' scores. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief and the CSTL Deputy Director, in collaboration, will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, whether the application furthers the objectives of the Department of Commerce, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Physics Laboratory Grants Program

For the *Physics Laboratory Grants Program*, responsive proposals will be considered as follows: First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the proposal will conduct a technical review of each proposal, based on the evaluation criteria described the Criteria section above. Reviews will be conducted on a monthly basis within each division of the Physics Laboratory, and all proposals received during the month will be ranked based on the reviewers' scores. If non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Next, the Division Chief will make final application selections, taking into consideration the results of the reviewers' evaluations, including rank; the compilation of a slate that, when taken as a whole, is likely to best further the program interests described in the Program Description section above; and the availability of funds. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible.

Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award.

The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Materials Science and Engineering Laboratory Grants Program

Review and Selection Process: For the *MSEL Grants Program* proposals will be reviewed in a two-step process. First, at least three independent, objective individuals knowledgeable in the particular scientific area addressed by the proposal will conduct a technical review. Proposals are received on a rolling basis and will be reviewed based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Division Chief or Laboratory Deputy Director will make application selections. In making application selections, the Division Chief or Laboratory Deputy Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section of the FFO. For conferences, workshops, or other technical research meetings, the Division Chief or Laboratory Deputy Director will also take into consideration whether they align with ongoing MSEL programmatic activities. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record-keeping purposes. The remaining copies will be destroyed.

Building Research Grants and Cooperative Agreements Program

All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for recordkeeping purposes. The remaining copies will be destroyed.

Responsive proposals will be forwarded to the appropriate Division Chief, who will assign them to appropriate reviewers. At least three independent, objective individuals knowledgeable about the particular scientific addressed by the proposal will conduct a technical review based on the evaluation criteria. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Reviews will be conducted no less than once per quarter, and all proposals since the last review session will be ranked based on the reviewers' scores.

Next, the Division Chief, Laboratory Deputy Director, or Laboratory Director will make application selections. In making application selections, the Division Chief, Laboratory Deputy Director, or Laboratory Director will take into consideration the results of the evaluations, the scores of the reviewers, the availability of funds, and relevance to the objectives of the *Building Research Grants and Cooperative Agreements Program*, as described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Fire Research Grants Program

Prospective proposers are encouraged to contact the group leaders listed in the FFO announcement to determine the responsiveness of the proposal and compliance with program objectives prior to preparation of a detailed proposal; however, written pre-proposals and white papers are not solicited and will not be reviewed for other than compliance and

responsiveness. Responsive proposals will be assigned, as received on a rolling basis, to the most appropriate group. Proposals are evaluated for technical merit based on the evaluation criteria described above by at least three reviewers chosen from NIST professionals, technical experts from other interested government agencies, and experts from the fire research community at large. When non-Federal reviewers are used, reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. The group leaders will make funding recommendations to the Division Chief based on the technical evaluation score and the relationship of the work proposed to the objectives of the program. Proposal submitted to another agency will be considered for possible joint-funding if approved by the other agency.

In making application selections, the Division Chief will take into consideration the results of the evaluations, the scores of the reviewers, the group leader's recommendation, the availability of funds, and relevance to the objectives of the *Fire Research Grants Program*, as described in the Program Description section above. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The award decision of the Grants Officer is final. Applicants should allow up to 90 days processing time.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Information Technology Laboratory Grants Program

For the *Information Technology Laboratory (ITL) Grants Program*, proposals will be reviewed in a three-step process. First, the Deputy Director of ITL, or appropriate designee, will determine the compatibility of the applicant's proposal with ITL Program Areas and the relevance to the objectives of the *ITL Grants Program*, described in the Program Description section above. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. If a proposal is determined to be incomplete or non-responsive, or if it is determined that all available funds have been exhausted, the proposal will not be reviewed for technical merit. Proposers may contact ITL at 301-975-2901 to find out if funds have been exhausted for the fiscal year. ITL will also post a notice on its web site, www.itl.nist.gov , when funds are exhausted for the fiscal year. ITL will notify proposers in writing if their proposals are not reviewed for technical merit.

Second, at least three independent, objective individuals knowledgeable about the particular measurement science area described in the section above that the proposal addresses will conduct a technical review of each proposal, based on the evaluation criteria described above. Reviews will be conducted on a quarterly basis, and all responsive, complete proposals received and reviewed since the last quarter will be ranked based on the reviewers' scores. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus.

Third, the Division Chief, in accord with the Director of ITL, will make application selections, taking into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives described in the Program Description section above.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decisions of the Grants Officer are final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

NIST Center for Neutron Research Grants Program

Proposals submitted to the *NCNR Grants Program* will be reviewed in a two-step process. First, at least three independent, objective individuals knowledgeable about the particular scientific area described in the Program Description section above that the proposal addresses will conduct a technical review of proposals, as they are received on a rolling basis, based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposals with each other, but scores will be determined on an individual basis, not as a consensus. Second, the Center Director will make application selections. In making application selections, the Center Director will take into consideration the results of the reviewers' evaluations,

the availability of funds, and relevance to the objectives of the NCNR Grants Program, described above in the Program Description section. The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets, and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

For the *Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program*, responsive proposals will be assigned, as received on a rolling basis, to the most appropriate area for review. Proposals will be reviewed in a three-step process. First, the CNST Deputy Director will determine the applicability of the proposal with regard to CNST programs and the relevance of the proposal's objectives to current CNST research. If it is determined that the proposal is incomplete or non-responsive to the scope of the stated objectives, the proposal will not be reviewed for technical merit. Second, the appropriate CNST Program Manager will determine the possibility for funding availability within the CNST technical program area most relevant to the objectives of the proposal. If it is determined that sufficient funding is not available to consider grants and cooperative agreement proposals in the technical area of the proposal, the proposal will not be reviewed for technical merit. Third, if the proposal passes the first two steps, at least three independent, objective individuals knowledgeable about the particular scientific area addressed by the proposal will conduct a technical review based on the evaluation criteria. If non-Federal reviewers are used, the reviewers may discuss the proposal with each other, but scores will be determined on an individual basis, not as a consensus.

The CNST Director will make application selections from the grants and cooperative agreement proposals submitted. In making the application selections, the Laboratory Director will take into consideration the results of the reviewers' evaluations, the availability of funds, and relevance to the objectives of the *CNST Grants and Cooperative Agreements Program.* These objectives are described above in the Program Description section.

The final approval of selected applications and award of financial assistance will be made by the NIST Grants Officer based on compliance with application requirements as published in this notice, compliance with applicable legal and regulatory requirements, and whether the recommended applicants appear to be responsible. Applicants may be asked to modify objectives, work plans, or budgets and provide supplemental information required by the agency prior to award. The decision of the Grants Officer is final.

Unsuccessful applicants will be notified in writing. The Program will retain one copy of each unsuccessful application for three years for record keeping purposes. The remaining copies will be destroyed.

3. Anticipated Announcement and Award Dates: Awards will be made approximately 90 days after the end of the review cycle. See information in the Dates section regarding awards made in a subsequent fiscal year.

f. Award Administration Information

1. Award Notices: Successful finalists will receive a grant or cooperative agreement award document from the Grant Officer. The document will be mailed via surface mail in triplicate. The recipient should have an authorized official at the organization sign and return two copies to the address listed in the award document. The award document will also include the standard terms and conditions, general terms and conditions (if any), and special award conditions (if any) that are applicable.

2. Administrative and National Policy Requirements:

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements, 69 Fed. Reg. 78389 (Dec. 30, 2004), is applicable to this announcement. On the form SF-424, the applicant's 9-digit Dun and Bradstreet Data Universal Numbering System (DUNS) number must be entered in the Applicant Identifier block.

Collaborations with NIST Employees: All applications should include a description of any work proposed to be

performed by an entity other than the applicant, and the cost of such work should ordinarily be included in the budget.

If an applicant proposes collaboration with NIST, the statement of work should include a statement of this intention, a description of the collaboration, and prominently identify the NIST employee(s) involved, if known. Any collaboration by a NIST employee must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the approval of the proposed collaboration. Any unapproved collaboration will be stricken from the proposal prior to the merit review.

Use of NIST Intellectual Property: If the applicant anticipates using any NIST-owned intellectual property to carry out the work proposed, the applicant should identify such intellectual property. This information will be used to ensure that no NIST employee involved in the development of the intellectual property will participate in the review process for that competition. In addition, if the applicant intends to use NIST-owned intellectual property, the applicant must comply with all statutes and regulations governing the licensing of Federal government patents and inventions, described at 35 U.S.C. §§200-212, 37 C.F.R. Part 401, 15 C.F.R. Part 14.36, and in Section B.20 of the Department of Commerce Pre-Award Notification Requirements, 69 Fed. Reg. 78389 (Dec. 30, 2004). Questions about these requirements may be directed to the Counsel for NIST, 301-975-2803.

Any use of NIST-owned intellectual property by a proposer is at the sole discretion of NIST and will be negotiated on a case-by-case basis if a project is deemed meritorious. The applicant should indicate within the statement of work whether it already has a license to use such intellectual property or whether it intends to seek one.

If any inventions made in whole or in part by a NIST employee arise in the course of an award made pursuant to this notice, the United States government may retain its ownership rights in any such invention. Licensing or other disposition of NIST's rights in such inventions will be determined solely by NIST, and include the possibility of NIST putting the intellectual property into the public domain.

Initial Screening of all Applications: All applications received in response to this announcement will be reviewed to determine whether or not they are complete and responsive to the scope of the stated program objectives. Incomplete or non-responsive applications will not be reviewed for technical merit. The Program will retain one copy of each non-responsive application for three years for record keeping purposes. The remaining copies will be destroyed.

Research Projects Involving Human Subjects, Human Tissue, Data or Recordings Involving Human Subjects: Any proposal that includes research involving human subjects, human tissue, data or recordings involving human subjects must meet the requirements of the Common Rule for the Protection of Human Subjects, codified for the Department of Commerce at 15 C.F.R. Part 27. In addition, any proposal that includes research on these topics must be in compliance with any statutory requirements imposed upon the Department of Health and Human Services (DHHS) and other federal agencies regarding these topics, all regulatory policies and guidance adopted by DHHS, the Food and Drug Administration, and other Federal agencies on these topics, and all Presidential statements of policy on these topics. NIST will accept the submission of human subjects protocols that have been approved by Institutional Review Boards (IRBs) possessing a current registration filed with DHHS and to be performed by institutions possessing a current, valid Federal-wide Assurance (FWA) from DHHS. NIST will not issue a single project assurance (SPA) for any IRB reviewing any human subjects protocol proposed to NIST. On August 9, 2001, the President announced his decision to allow Federal funds to be used for research on existing human embryonic stem cell lines as long as prior to his announcement (1) the derivation process (which commences with the removal of the inner cell mass from the blastocyst) had already been initiated and (2) the embryo from which the stem cell line was derived no longer had the possibility of development as a human being. NIST will follow guidance issued by the National Institutes of Health at http://ohrp.osophs.dhhs.gov/humansubjects/guidance/stemcell.pdf for funding such research.

Research Projects Involving Vertebrate Animals: Any proposal that includes research involving vertebrate animals must be in compliance with the National Research Council's "Guide for the Care and Use of Laboratory Animals" which can be obtained from National Academy Press, 2101 Constitution Avenue, NW., Washington, DC 20055. In addition, such proposals must meet the requirements of the Animal Welfare Act (7 U.S.C. §2131 et seq.), 9 C.F.R. Parts 1, 2, and 3, and if appropriate, 21 C.F.R. Part 58. These regulations do not apply to proposed research using pre-existing images of animals or to research plans that do not include live animals that are being cared for, euthanized, or used by the project participants to accomplish research goals, teaching, or testing. These regulations also do not apply to obtaining animal materials from commercial processors of animal products or to animal cell lines or tissues from tissue banks.

Limitation of Liability: Funding for the program(s) listed in this notice is contingent upon the availability of Fiscal Year 2008 appropriations under The Consolidated Appropriations Act, 2008 (P.L. 110-161). In no event will NIST or the Department of Commerce be responsible for proposal preparation costs if this program(s) fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not oblige NIST or the Department of

Commerce to award any specific project or to obligate any available funds.

Collaborations making use of Federal Facilities: All applications should include a description of any work proposed to be performed using Federal Facilities.

If an applicant proposes use of NIST facilities, the statement of work should include a statement of this intention and a description of the facilities. Any use of NIST facilities must be approved by appropriate NIST management and is at the sole discretion of NIST. Prior to beginning the merit review process, NIST will verify the availability of the facilities and approval of the proposed usage. Any unapproved facility use will be stricken from the proposal prior to the merit review. Examples of some facilities that may be available for collaborations are listed on the NIST Technology Services web site, http://ts.nist.gov/.

3. Reporting: Successful finalists will be required to submit, on a semi-annual basis, except for the Fire Research Grants Program, which requires quarterly basis, for the periods ending March 31 and September 30 of each year, a technical progress report and a SF-269, Financial Status Report. From time to time, and in accordance with the Uniform Administrative Requirements and other terms and conditions governing the award, the recipient may need to submit property and patent reports.

4. Individual Background Screening Using Form CD-346, Applicant for Funding Assistance: Certain key individuals of successful applicants may be required to complete and submit Form CD-346, Applicant for Funding Assistance. The background screening process is a tool designed to assist program and grants administration officials in determining responsibility, financial integrity and management principles of a successful applicant. The award terms and conditions will include this background screening requirement.

g. Agency Contact(s):

Electronics and Electrical Engineering Laboratory Grants Program

Program questions should be addressed to Sheilda Bryner, Electronics and Electrical Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8100, Gaithersburg, MD 20899-8100, Tel.: (301) 975-2220, Fax: (301) 975-4091.

Manufacturing Engineering Laboratory Grants Program

Program questions should be addressed to Ms. Alana Glover, Manufacturing Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8200, Building 220, Room B322, Gaithersburg, Maryland 20899-8200, Tel: (301) 975-3400, E-mail: aglover@nist.gov.

Chemical Science and Technology Laboratory Grants Program

Program questions should be addressed to Ms. Donna Kimball, Chemical Science and Technology Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8300, Gaithersburg, MD 20899-8300, Tel (301) 975-8300, E-Mail: donna.kimball@nist.gov.

Physics Laboratory Grants Program

Program questions should be addressed to Ms. Anita Sweigert, Physics Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8400, Gaithersburg, MD 20899-8400, Tel (301) 975-4200, E-Mail: anita.sweigert@nist.gov. It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

Materials Science and Engineering Laboratory Grants Program

Program questions should be addressed to Ms. Nancy Selepak, Materials Science and Engineering Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8500, Gaithersburg, Maryland 20899-8500, Tel: (301) 975-2047 E-mail: nancy.selepak@nist.gov.

Building Research Grants and Cooperative Agreements Program

Program questions should be addressed to Karen Perry, Building and Fire Research Laboratory, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8602, Gaithersburg, MD 20899-8602, Tel.: (301) 975-5910,

karen.perry@nist.gov , Fax: (301) 975-4032, and web site http://www.bfrl.nist.gov.

Fire Research Grants Program

Program questions should be addressed to Ms. Wanda Duffin-Ricks, Building and Fire Research Laboratory (BFRL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8660, Gaithersburg, Maryland 20899-8660, Tel: (301) 975-6863, E-mail: wanda.duffin@nist.gov , Website: http://www.bfrl.nist.gov.

Information Technology Laboratory Grants Program

Program questions should be addressed to Kamie Roberts, Information Technology Laboratory (ITL), National Institute of Standards and Technology, 100 Bureau Drive, Stop 8900, Gaithersburg, MD 20899-8900, Tel.: (301) 975-2901, kamie.roberts@nist.gov , Fax: (301) 975-2378, website: http://www.itl.nist.gov . It is strongly suggested to first confirm the program objectives with the Program Manager prior to preparing a detailed proposal.

NIST Center for Neutron Research Grants Program

Program questions should be addressed to Dr. Dan Neumann, NIST Center for Neutron Research, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6102, Gaithersburg, Maryland 20899-8562, Tel: (301) 975-5252, E-mail: dan@nist.gov.

Center for Nanoscale Science and Technology (CNST) Grants and Cooperative Agreements Program

Program questions should be addressed to Donna Lauren, Center for Nanoscale Science and Technology, National Institute of Standards and Technology, 100 Bureau Drive, Stop 6200, Gaithersburg, Maryland 20899-6200. Tel (301) 975-3729, E-Mail: donna.lauren@nist.gov.

The following **applies to ALL programs** listed in this funding opportunity notice:

Grants administration questions concerning this program should be addressed to: Melinda Chukran, NIST Grants and Agreements Management Division, (301) 975-5266; melinda.chukran@nist.gov. For assistance with using Grants.gov contact support@grants.gov.

Instructions for Applying for the NIST Announcement 2008-MSE-01:

Applicants should download and complete the package that is provided with this Federal Funding Opportunity notice.

Complete applications/proposals must include the following forms and documents:

- SF-424, Application for Federal Assistance
- SF-424A, Budget Information Non-Constructions
- SF-424B, Assurances Non-Construction
- CD-511, Certification Regarding Lobbying
- SF-LLL, Disclosure of Lobbying Activities (IF APPLICABLE)
- Technical Proposal responsive to program description(s)
- Budget Narrative

The following forms are available as part of the Grants.gov application kit and can be completed through the download application process.

SF-424, Applications for Federal Assistance
SF-424A, Budget Information Non-Construction Programs
SF-424B, Assurances Non-Construction Programs
SF-LLL, Disclosure of Lobbying Activities
CD-511, Certification Regarding Lobbying

The list of certifications and assurances referenced in item 21 of the SF-424 is contained in the SF-424B.

Proposals that are submitted without a Technical Proposal and/or a Budget Narrative will be rejected. There is no set format for the Technical Proposal and the Budget Narrative, other than that they are word-processed documents written by

the applicant. The Technical Proposal should describe in depth the scope of the proposal, its goals, the methods and equipment to be used, its schedule, the personnel working on the project and their qualifications, and the institutional capabilities of the applicant. The Budget Narrative should detail the funds requested, their purposes, and the timetable for using the funds.

Applicant is responsible for ensuring that the application, whether submitted via Grants.gov or otherwise, is complete and that it conforms to the requirements of this notice.

In order for an application to be considered complete it must meet all the application documentation requirements stated in the Federal Funding Opportunity notice.

IN AN EFFORT TO ROUTE THE APPLICATION TO THE APPROPRIATE PROGRAM OFFICIALS, APPLICANTS SHOULD INCLUDE ON THE COVER PAGE OF THE TECHNICAL PROPOSAL THE NAME OF THE GRANT AND/OR COOPERATIVE AGREEMENT PROGRAM AGAINST WHICH THEY ARE APPLYING. THE CHOICES ARE:

(1) Electronics and Electrical Engineering Laboratory (EEEL);
(2) Manufacturing Engineering Laboratory (MEL);
(3) Chemical Science and Technology Laboratory (CSTL);
(4) Physics Laboratory;
(5) Materials Science and Engineering Laboratory (MSEL);
(6) Building Research Program;
(7) Fire Research Program;
(8) Information Technology Laboratory Program (ITL);
(9) NIST Center for Neutron Research (NCNR); and
(10) Center for Nanoscale Science and Technology (CNST.)

Applicants may choose to scan or create the necessary documents and then attach them to the application in Grants.gov.

If you choose to apply via Grants.gov all requirements of the application must be included.

For further information or questions regarding applying electronically for the 2008-MSE-01 announcement please contact Christopher Hunton at 301-975-5718 or christopher.hunton@nist.gov or Sue Li at sue.li@nist.gov.

Applicants are strongly encouraged to start early and not to wait to the approaching due date before logging on and reviewing the instructions for submitting an application through Grants.gov. Applicants should save and print the proof of submission they receive from Grants.gov. If problems occur while using Grants.gov, the applicant is advised to (a) print any error message received, and (b) call Grants.gov directly at 800-518-4726 for immediate assistance. Grants.gov hours of operation are Monday-Friday, 7:00 a.m. to 9:00 p.m. Eastern Standard Time (except for Federal holidays). NIST may allow more time for applicant submission past the deadline due to system problems at Grants.gov that are beyond the control of the applicant.